Student Name _____ Homeroom Teacher_____

NTI Day 22

Special Area -STEM Lab 3-5

You may access this lesson electronically from the following webpages:

Special Area - http://cgesspecialarea.weebly.com/

STEM Lab - http://cgesstem.weebly.com/

NGSS: 3-5-ETS1-2	Learning Target: I am designing a marble track that meets the criteria of the challenge.
Challenge	Design a marble track that will keep the marble or small ball rolling slowly from start to finish.
Criteria/Constraints	• The marble/ball should start at least 3 feet above the floor • The track may be attached to the wall, door, chair, cardboard, cabinet, ladder, etc. Please ask permission before you attach the track to any of the suggested items • The track should have at least six turns • The track may be open or closed (you may cut the toilet paper/paper towel rolls in half) • The marble/ball should not come off the track until it reaches the end • The track should be made of recycle materials you have at home – toilet paper rolls, paper towel rolls, paper, cereal box cardboard, foil, cups, egg cartons, pool noodles (ask permission before using them), straws, sticks, blocks, Legos, tape, other things you have at home
Choose one way to show your design:	• Marble track may be a drawing of your idea on the other side of this paper or a different piece of paper • Color the drawing • Label the drawing with the materials you would use if you were going to make the marble track with recycled materials from home **OR** • Marble track may be a model of your idea made with recycled materials you have at home • Remember to ask permission before taping track to the wall, door, table, chairs, etc. • Test it – put a marble/ball on the track and time how long it takes to reach the bottom
Reflection	You may complete your answer to the reflection on paper or on the response form for NTI Day 22 on the Special Area web page. • **If you made a drawing** tell why you think the length and direction of your track pieces help to slow your marble down. • **If you made a model** tell what happened when you tested it. Explain why the length and direction of your track pieces helped slow your marble down. What could you change about the track to make it take longer to reach the bottom? Why do you think that would take longer? Remember to upload or email a photo of your model.